

Having thus described the invention, it is claimed:

1. A canister 5 for capturing and storing fuel vapors from a device, comprising: a housing 10, and one of a plurality of cartridges 20 sealably assembled therein; wherein the one of the plurality of cartridges 20 is operable to capture and store at least a portion of the fuel vapors from the device, and is selected based upon a measure of the fuel vapors from the device generated during predetermined conditions.
2. The canister 5 of claim 1, wherein the housing 10 comprises an air inlet 12, and a sealing surface 50 substantially adjacent the air inlet 12; wherein a first end 31 of the one of the plurality of cartridges 20 is fluidly sealed to the sealing surface 50, such that substantially all fluid communication between the air inlet 12 to the canister occurs through the first end 31 of the one of the plurality of cartridges 20.
3. The canister 5 of claim 2, wherein the housing 10 further comprises a purge outlet 14, and a vapor inlet 18; and wherein the purge outlet 14 and the vapor inlet 18 are in fluid communication with a second end 33 of the one of the plurality of cartridges 20.
4. The canister of claim 3, wherein a first cartridge 40 of the plurality of cartridges 20 is fixably attached to the housing 10 near the second end 33 of the first cartridge 40.
5. The canister of claim 3, wherein a second cartridge 42 of the plurality of cartridges 20 is fixably attached to the housing 10 using a cover 15 of the housing 10.
6. The canister 5 of claim 3, wherein a first cartridge 40 of the plurality of cartridges 20 comprises a storage chamber 22 containing a predetermined quantity of adsorption material.

7. The canister 5 of claim 4, wherein the canister 5 with the first cartridge 40 comprising the storage chamber 22 containing the predetermined quantity of adsorption material is operable to adsorb substantially all of the quantity of fuel vapors generated by the device when the predetermined conditions comprise a two-day diurnal test plus a hot soak.

8. The canister 5 of claim 3, wherein a second cartridge 42 of the plurality of cartridges 20 comprises a storage chamber 22 containing a predetermined quantity of adsorption material and a hydrocarbon scrubber 24.

9. The canister 5 of claim 8, wherein the canister 5 with the second cartridge 42 comprising the storage chamber 22 containing the predetermined quantity of adsorption material and the hydrocarbon scrubber 24 is operable to adsorb substantially all of the quantity of fuel vapors generated by the device when the predetermined conditions comprise a three-day diurnal test plus a hot soak.

10. The canister 5 of claim 9, wherein the hydrocarbon scrubber 24 is operable to adsorb fuel vapor bleed emissions.

11. The canister 5 of claim 1, wherein each one of the plurality of cartridges 20 is interchangeable in the housing 10.

12. The canister 5 of claim 2, wherein there is at least one seal device 30 sealably engaged between the first end 31 of the one of the plurality of cartridges 20 and the sealing surface 50 of the housing 10.

13. The canister 5 of claim 3, further comprising a housing chamber 16 operable to provide a fluid conduit for fluid communication between the purge outlet 14 and the vapor inlet 18 and the second end 33 of the one of the plurality of adsorbing cartridges 20.

14. The canister 5 of claim 13, wherein the housing chamber 16 contains a predetermined quantity of adsorption material operable to adsorb at least a substantial portion of the quantity of fuel vapors generated by the device during the predetermined conditions.

15. The canister 5 of claim 1, wherein the device comprises a motorized vehicle.

16. The canister 5 of claim 1, wherein the device comprises a hand-held device including an internal combustion engine.

17. The canister 5 of claim 1, wherein the device comprises a stationary internal combustion engine with a fuel source.

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18. A method to assemble a canister 5 for adsorbing fuel vapors generated by a device, comprising:

selecting one of a plurality of cartridges 20 based upon a quantity of fuel vapors generated by the device under predetermined conditions; and,

assembling the selected one of the plurality of cartridges 20 to a housing 10 of the canister 5.

19. The method of claim 18, wherein assembling the selected one of the plurality of cartridges 20 to the housing 10 of the canister 5 comprises:

inserting a first end 31 of the selected one of the plurality of cartridges 20 into the housing 10 until the first end 31 sealably engages a sealing surface 50 of the housing 10; and,

attaching a second end 33 of the selected one of the plurality of cartridges 20 to the housing 10.

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20. The method of claim 19, wherein selecting one of the plurality of cartridges
20 based upon the quantity of fuel vapors generated by the device under
predetermined conditions comprises selecting a first cartridge comprising a
predetermined quantity of adsorption material when the predetermined conditions
5 comprise a two-day diurnal test plus a hot soak.

21. The method of claim 19, wherein selecting one of the plurality of cartridges
20 based upon the quantity of fuel vapors generated by the device under
predetermined conditions comprises selecting a second cartridge comprising a
10 predetermined quantity of adsorption material and a hydrocarbon scrubber when
the predetermined conditions comprise three-day diurnal test plus a hot soak.